



US Army Corps
of Engineers®
Northwestern Division



JOINT PUBLIC NOTICE

Issue Date: July 2, 2015

Notice: The U.S. Army Corps of Engineers Northwestern Division (Corps) and the U.S. Environmental Protection Agency – Region 10 (EPA) are incorporating Parts 1 and 3 of the Regional Sediment Evaluation Team’s¹ (RSET’s) November 17, 2014 white paper, “Proposal to Revise Freshwater Sediment Screening Levels (FW SLs White Paper)” into Chapter 6 of the 2009 *Sediment Evaluation Framework for the Pacific Northwest* (SEF). Effective on the date of this public notice, these freshwater sediment screening levels shall be used to evaluate unconfined, aquatic discharges of dredged material throughout the states of Washington, Oregon, and Idaho.

The FW SLs White Paper is available here:

<http://www.nwd.usace.army.mil/Missions/CivilWorks/Navigation/RSET.aspx>

Background: The RSET agencies prepared the SEF regional sediment testing guidance. The SEF is used to determine the suitability of dredged material for unconfined, aquatic disposal throughout the Pacific Northwest Region.

Freshwater Screening Levels (FW SLs) were calculated using the Floating Percentile Method (FPM) and incorporated into the September 2006 Interim Final SEF. The RSET initiated the effort to update the FPM-based FW SLs in 2008. However, when the SEF was updated in May 2009, the FPM-based FW SLs were still under development; they were not included in the revised document (the RSET has used the 2006 FW SLs in the interim). The RSET completed development of the FPM-based FW SLs in 2011, and Washington promulgated these values as state sediment management standards in 2013.

The RSET presented the FW SLs White Paper at their 2014 annual meeting held in Portland, Oregon. The public comment period closed on January 23, 2015. In three parts, the FW SLs White Paper presented three sets of sediment screening levels to be used in conjunction with each other:

Part 1 – Revised benthic toxicity screening levels calculated using the FPM, to be incorporated into Table 6-3 (“Bulk Sediment Screening Levels for Chemicals of Concern”) of the 2009 SEF and subsequent revisions

Part 2 – Water quality-based screening levels using federal water quality criteria to protect higher trophic levels (such as federally protected fish species)

Part 3 – Using available state or local sediment/soil background concentrations of metals when project metals concentrations exceed the other proposed screening levels

¹ The RSET includes the U.S. Army Corps of Engineers (Corps) Northwestern Division, Portland, Seattle and Walla Walla Districts; U.S. Environmental Protection Agency - Region 10; National Marine Fisheries Service; U.S. Fish and Wildlife Service; Oregon Department of Environmental Quality; Washington Department of Ecology; Washington Department of Natural Resources; and the Idaho Department of Environmental Quality.

Public Comment and Freshwater Sediment Screening Level Implementation: The RSET received several substantive comments regarding the proposal to implement water quality-based screening levels, so Part 2 of the FW SLs White Paper will not be adopted at this time. RSET did not receive comments regarding the proposal to use the FPM-based FW SLs and sediment/soil background for metals, so Parts 1 and 3 of the FW SLs White Paper are incorporated into the SEF guidance.

The FPM freshwater sediment screening levels are presented Exhibit A of this public notice, and these values are incorporated into the Table 6-3 of the SEF. SEF users should note that the list of chemicals of concern is somewhat changed. The sediment/soil background metals concentrations presented in Part 3 of the FW SLs White Paper are dependent on the project location and are not presented in this public notice. Exhibit B illustrates how the FPM-based FW SLs will be implemented in conjunction with background metals concentrations in sediment. Since the water quality-based screening levels were not adopted by the RSET, Exhibit B also replaces Figure 1 of the FW SLs White Paper.

Regional and District Points of Contact: Questions regarding regional implementation of the freshwater sediment screening levels should be addressed to:

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Questions regarding Corps district implementation of the freshwater sediment screening levels should be sent to the appropriate point-of-contact:

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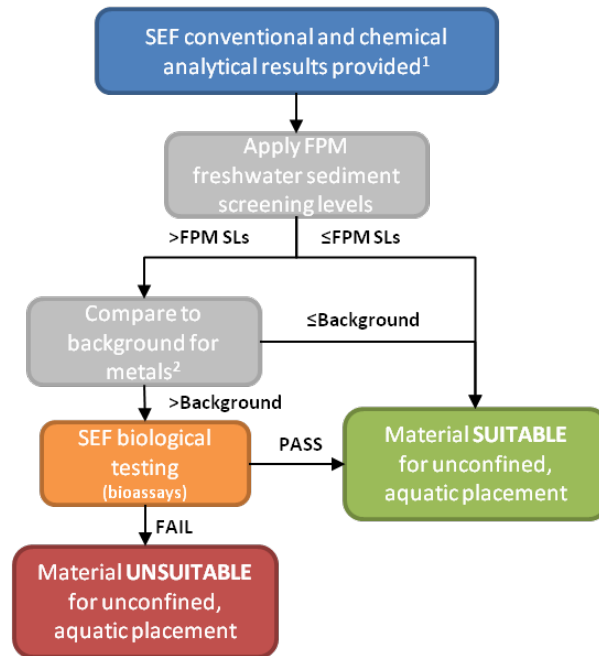
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EXHIBIT A. Floating Percentile Method Freshwater Benthic Toxicity Screening Levels.

Chemicals of Concern	BENTHIC Screening Levels	
	SL1 ¹	SL2 ²
<i>Metals (mg/kg)</i>		
Arsenic	14	120
Cadmium	2.1	5.4
Chromium	72	88
Copper	400	1200
Lead	360	>1300
Mercury	0.66	0.8
Nickel	26	110
Selenium	11	>20
Silver	0.57	1.7
Zinc	3200	>4200
<i>Organic contaminants (ug/kg)</i>		
Polynuclear Aromatic Hydrocarbons (PAHs)	17000	30000
Phenol	120	210
4-Methylphenol	260	2000
Pentachlorophenol	1200	>1200
bis(2)-Ethylhexyl)phthalate	500	22000
Di-n-butyl-phthalate	380	1000
Di-n-octyl-phthalate	39	>1100
beta-Hexachlorocyclohexane	7.2	11
Carbazole	900	1100
Dibenzofuran	200	680
Benzoic acid	2900	3800
Endrin ketone	8.5	*
Dieldrin	4.9	9.3
Dichlorodiphenyldichloroethanes (DDD's)	310	860
Dichlorodiphenyldichloroethylenes (DDE's)	21	33
Dichlorodiphenyltrichloroethanes (DDT's)	100	8100
Polychlorinated Biphenyls (Aroclors)	110	2500
Monobutyltin	540	>4800
Dibutyltin	910	130000
Tributyltin	47	320
Tetrabutyltin	97	>97
<i>Bulk Total Petroleum Hydrocarbons (TPHs) (mg/kg)</i>		
TPH-Diesel	340	510
TPH-Residual	3600	4400
<i>Conventional Parameters (mg/kg)³</i>		
Ammonia	230	300
Total sulfides	39	61
<p>* no SL2 available</p> <p>¹SL1 corresponds to a concentration below which adverse effects to benthic communities would not be expected.</p> <p>²SL2 corresponds to a concentration above which more than minor adverse effects may be observed in benthic organisms. Chemical concentrations at or below the cleanup screening level but greater than the sediment quality standard correspond to sediment quality that may result in minor adverse effects to the benthic community.</p> <p>³Ammonia and sulfides are generally used only to inform bioassay testing; sediments only containing elevated ammonia and/or sulfides (and no other chemical exceedances) may be determined suitable for unconfined, aquatic placement.</p>		

EXHIBIT B. Combined application of FPM freshwater screening levels and background metals concentrations for evaluation of the aquatic placement of dredged materials.



1 - Specific to the state in which the project is located, the FPM freshwater sediment screening levels may also be used to predict toxicity of the new surface material (i.e., the surface exposed after dredging) and address water quality concerns at the dredge area.

2 - Background concentrations are used only for metals and are specific to the state in which the project is located, as determined by the state water quality agency (Washington Department of Ecology, Oregon Department of Environmental Quality, or Idaho Department of Environmental Quality).